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10/624,814

07/22/2003

Masayuki Hira

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12/09/2004

TEXAS INSTRUMENTS INCORPORATED

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EXAMINER

HO, HOAI V

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,814

Applicant(s)

HIRA ET AL.

Examiner

Hoai V. Ho

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This office acknowledges receipt of the following items from the Applicant:

Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.
2. Claims 1-8 are presented for examination.

Specification

Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (AAPA).

Figure 6 of AAPA is directed to a semiconductor storage device comprising: an amplifier that is activated corresponding to a control signal (ENN) and amplifies the potential difference between a first node (SA) and a second node (SAZ); a first switch circuit (Qp1) that is connected between a first bit line (BL) and said first node and is controlled to the OFF state after activation of said amplifier; and a second switch circuit (Qp2) that is connected between a second bit line (BLZ) and said second node and is controlled to the OFF state after activation of said amplifier.

6. Claims 1, 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kozaru et al. U.S. Patent No. 5539691.

Figure 1 of Kozaru is directed to a semiconductor storage device comprising: an amplifier (39 or fig 2) that is activated corresponding to a control signal (11') and amplifies the potential difference between a first node (29) and a second node (30); a first switch circuit (19a or 27a) that is connected between a first bit line (15a) and said first node and is controlled to the OFF state after activation of said amplifier; and a second switch circuit (19b or 27b) that is connected between a second bit line (15b) and said second node and is controlled to the OFF state after activation of said amplifier.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Wada U. S. Patent No. 5724292.

Per claims 2 and 3, AAPA discloses all the subject matter claimed except for further comprising a delay circuit that outputs said control signal with a prescribed delay time and, by means of an output signal of said delay circuit, said first switch circuit and said second switch circuit are controlled to be OFF. However, Figure 27 of Wada discloses a delay circuit (315) that

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outputs said control signal (BSi) with a prescribed delay time and, by means of an output signal of said delay circuit, said first switch circuit (310a having a p-type MOS transistor and an n-type MOS transistor coupled together in parallel in claim 3) and said second switch circuit (310a having a p-type MOS transistor and an n-type MOS transistor coupled together in parallel in claim 3) are controlled to be OFF. It would have been obvious to a person of ordinary skill in the art at the time invention was made to modify AAPA circuit which utilizes the delay circuit as taught by Wada in order to compensate for the time delay caused in the transmission (col. 37, lines 30 and 31).

Per claim 5, AAPA discloses all the subject matter claimed except for further comprising a first charging circuit which is coupled to said first bit line and said second bit line and which charges said first bit line and said second bit line to a prescribed potential. However, Figure 27 of Wada discloses the first charging circuit which (2aa and 3aa) is coupled to said first bit line and said second bit line. It would have been obvious to a person of ordinary skill in the art at the time invention was made to recognize that AAPA could have the first charging circuit as taught by Wada in order to charge said first bit line and said second bit line to a prescribed potential.

Per claims 6 and 7, AAPA discloses all the subject matter claimed except for further comprising a second charging circuit which is coupled to said first node and said second node and which charges said first node and said second node to a prescribed potential. However, Figure 28 of Wada discloses the first charging circuit which (330) is coupled to said said first node (SN1) and said second node (SN2). It would have been obvious to a person of ordinary skill in the art at the time invention was made to recognize that AAPA could have the second

charging circuit as taught by Wada in order to charge said first node and said second node to a prescribed potential.

Per claim 8, AAPA discloses all the subject matter claimed except for further comprising a first data write circuit coupled to said first bit line and a second data write circuit coupled to said second bit line. However, Figures 1 and 3 of Wada discloses the first data write circuit (7) coupled to said first bit line and a second data write circuit coupled to said second bit line. It would have been obvious to a person of ordinary skill in the art at the time invention was made to recognize that AAPA could have the first and second data write circuits as taught by Wada in order to write data to said first and second bit lines.

9. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

10. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai V. Ho whose telephone number is (571) 272-1777. The examiner can normally be reached on 7:00 AM -- 5:30 PM from Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



hvh
November 23, 2004



Hoai V. Ho
Primary Examiner
Art Unit 2818